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AUTHOR	Trow, Martin
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ABSTRACT

Some of the characteristics of large, public universities that limit the kinds of educational innovations that are desirable are discussed. These characteristics are: Resources; The Teaching Assistant; The Faculty; State University Undergraduates; The Organizational Patterns of Large State Universities. The implications of these characteristics for innovation and improvement in social science teaching are presented. In Appendix 1, the Scholastic Aptitude Test Scores of entering Freshmen at Berkeley are compared with Freshmen classes in Harvard, Stanford, Cal Tech, and MIT for the year 1960, and with Michigan and Cornell for the year 1964. In addition, the SAT Verbal Scores for entering students in 1960-61 at Berkeley, Amherst, Cal Tech, and MIT are compared. Appendix 2 is A Proposal for an Honors College at Berkeley. (DB)

Notes on Undergraduate Teaching at Large State Universities

Martin Trow

The discussions and memoranda that have emerged from the Tufts and Boston meetings have impressed me as imaginative and practical ways of improving the teaching of social science in many colleges and universities. At the same time, I have been struck by the irrelevance of much of what has been said and written to the conditions of learning and teaching in the very large public universities. These conditions, some of which I mean to discuss, are not the same in all large public universities; indeed, they vary from department to department within the same institution. And some of these conditions obtain in large private universities as well. But where they are found, they limit the kinds of educational innovations that are both possible and desirable to introduce. Some of them are part of the very nature of large American public universities, and are difficult if not impossible to modify. It may be helpful to reflect on some of the characteristics of large public universities, their faculty and student bodies, since these characteristics provide both the incentives and resources for educational reform, as well as a special set of constraints and difficulties.

1. Resources

The large state universities typically invest relatively smaller resources in undergraduate teaching than do either leading private liberal arts colleges or private universities. For example, in 1962 the University

of California at Berkeley numbered 1311 full-time faculty who taught roughly 16,300 undergraduates and 8,400 graduate students. In the same year Michigan had 1,174 full-time faculty teaching 19,600 undergraduates and 10,400 graduate students. At the same time Harvard (with Radcliffe) had 1400 full-time faculty teaching 5900 undergraduates and 7600 graduate students; Princeton 521 full-time faculty for 3100 undergraduates and 1000 graduate students; and Amherst had 124 faculty for 1000 undergraduates and a handful of graduates. These figures are reflected in the fact that the introductory social science courses at the big state universities are often taught by one or two faculty members and a small army of teaching assistants in classes of five hundred to a thousand, while classes of that size are very rare in the leading private colleges and universities.

It is difficult using only published figures on faculty-student ratios to compare with any precision the resources assigned to undergraduate teaching in different institutions. We cannot subtract the numbers of faculty attached to professional schools and departments, since some of them do undergraduate teaching as well. By contrast, some proportion of the faculty of the arts and sciences departments in big universities do little or no undergraduate teaching. The number of "full-time faculty" is itself misleading, especially in the "Federal grant universities," since so many of them are almost permanently on part-time research appointments, as well as on frequent full-time research leaves.* The definition and role of "part-time faculty" varies from

* In a recent survey of the regular "full-time" faculty at Berkeley, a third reported themselves as teaching "part-time."

institution to institution; in some universities and departments they carry an important part of the undergraduate teaching load, while elsewhere they are almost wholly on research appointments. The number and function of graduate teaching assistants, associates, and Fellows varies considerably. The "non-teaching" professional staff members of research institutes do a significant but indeterminate amount of undergraduate teaching, both formally and informally. And so forth.

Nevertheless, and subject to correction by others with better evidence, the evidence and impressions I have lead me to believe that the undergraduates, and especially the first and second year students, in big state universities get less of the regular faculty's time and energy than is true in most other kinds of colleges and universities. (This says nothing about the quality of the teaching they get as compared with others elsewhere.) It is, of course, possible to mobilize faculty resources for an experimental course even in the big public universities, and to concentrate teachers at specific points in the curriculum to create local (and temporary) conditions that in terms of staff-student ratio approximate those of private institutions. Such efforts are of value, if only because they can serve to demonstrate the possibilities of creative teaching under favorable conditions. But the overall paucity of faculty resources in the undergraduate colleges of large state universities very greatly limits the kinds of reforms that can be widely adopted throughout the institution. Either we find ways to increase

those resources, or we must direct our thoughts toward the invention of effective forms of teaching predicated on low faculty-student ratios. And this latter poses somewhat different kinds of problems than are faced by innovators in the leading private colleges and universities.

2. The Teaching Assistant

The widespread employment of teaching assistants is the principal means by which large public universities currently try to compensate for the relatively small numbers of "full-time equivalent" faculty actually engaged in teaching undergraduates. Put another way, their use is a way of enabling those institutions to commit relatively small resources of faculty time to teaching very large numbers of undergraduates.

The two most common and alternative ways of maintaining a program of undergraduate education with a poor staff-student ratio are (1) the imposition of a heavy load of undergraduate teaching on the existing staff, and (2) large classes.* State colleges without large graduate programs are known for their heavy teaching loads. Leading state universities, with some exceptions, have opted for large classes, naturally so in light of their interest in post-graduate training and research, necessarily so if men with such interests (and the scholarly distinction

* Closed circuit television, "independent study," residence halls with "faculty fellows," autonomous colleges with their own faculty, and other devices are also being used to meet the problem of scarce faculty resources in big universities. But these are more or less "experimental" approaches whose effectiveness can be assessed and criticized. Teaching assistants, in my view, are part of the problem rather than contributions to its solution.

they earn) can be recruited in a briskly competitive market. Teaching loads in the leading state universities, even apart from the substantial number of faculty on part-time research appointments, are comparable to those of institutions with much more favorable faculty-student ratios. Nevertheless, unlike the faculties of many European universities, where the ratio of staff to students is even lower than at our state universities, we accept as important elements of undergraduate instruction both the existence of classes small enough to allow student discussion and questions, and the close scrutiny of students' written work by the instructor. But it is impossible in very large courses to give the student the advantage of this close attention without the use of assistant teachers whose time is devoted primarily to talking to students, in class and office hours. The TA's, then, fill the gap created by (a) a poor faculty-student ratio, (b) a research-minded faculty, and (c) the American conception of undergraduate education involving some measure of direct contact between student and teacher.

Nevertheless, while the TA system has the appearance of inevitability arising out of scarce resources, it is a poor solution to the problem, both educationally and administratively.

1. TAs are often poor teachers. Graduate departments in the big state universities admissions are relatively unselective: many admit one of every two applicants. A large intake ensures that a department will have reasonable numbers of first-rate graduate students, but the majority are often not highly able or strongly commited to

the discipline. Yet the demand for TAs, together with the competitive attractions of fellowships and RAs and Associateships, ensures that a fair proportion of TAs are among the less able students in the department.

2. Apart from abilities, the TA is, by the nature of his circumstance, often poorly equipped or motivated to be a good undergraduate teacher. His performance as a TA has little or no bearing on his future career, or even on his progress through the department. He has a heavy load of course work, reading and writing, all of which is clearly important to his short-range career in his discipline. In addition, his attitude toward the faculty is often quite ambivalent--both dependent and resentful of their demands and authority. The iconoclastic and debunking graduate student is familiar to us all. These attitudes are natural and appropriate to the graduate student's situation; he is often defining his own style and intellectual posture over against those of his teachers, and a measure of lively intellectual resistance on the part of graduate students is a healthy aspect of their relation to the faculty. But these same attitudes are not so useful when they inform a TA's work with a group of undergraduates. What is part of a lively dialogue in a graduate seminar or in his relations with his thesis advisor too often appears as dogmatic and resentful sabotage of a faculty member's efforts to develop an approach to a subject in an undergraduate course. The harried, insecure, and often resentful graduate student is a poor instrument through which to carry a major part of undergraduate teaching, that part moreover which brings him into direct

contact with students unequipped to challenge his assertions.

3. In an effort to make a virtue of what has seemed a necessity, it is sometimes argued that the experience the TA gains in teaching is a useful part of his professional training. In the abstract, of course, it is. But in the event, TAs get precious little training for their future roles as teachers. As we know, despite pious wishes to the contrary most TAs get little supervision or help from the instructor of the course on their work in their sections. More important is the fact that TAs do not design the courses they "teach." In this respect, their experience as TAs is no preparation for their first real teaching job, where their major task is to create a course, a distinctive approach to a subject and a set of "methods" for presenting it. To teach a course is to make a series of decisions, in part "intellectual," in part "methodological" -- decisions about the nature and scope of the course, what should be dealt with and what excluded, what emphasized and what slighted, what read and what discussed. The TA makes few or none of these decisions; he teaches someone else's course, is guided by someone else's conception of the subject and its proper organization. Ordinarily he has little or nothing to say about the textbooks or assigned reading, the sequence of lectures or the treatment of ideas in them. His own freedom in his section is more like a bull-session after class than it is like the job of teaching he will have after leaving graduate school. Any graduate student gains far more experience of the nature of teaching if he teaches a course in Extension or at a nearby junior college.

4. The institution of TAs has other faults as well. We are all concerned with the inordinate length of time it takes for our graduate students to earn their degrees and begin their productive careers. Berelson makes clear that, on average, this is a result of students having to do jobs while in graduate school that do not contribute directly to their training and preparation of their dissertations. The dependency of many students on TAships as a major source of financial support certainly contributes to the slow movement of so many of them through the department.

TAs also paradoxically distract faculty members from their undergraduate teaching. Especially in the large introductory courses, a good deal of the teacher's time is spent organizing, coordinating, and administering the work of the TAs. Teaching for those faculty members becomes increasingly the task of administering and overseeing the work of others -- though this rarely involves actually supervising and criticizing their classroom work in their sections. This is an important though largely concealed drain on the time and energies of those who teach the large undergraduate courses.

5. The necessity of providing a body of TAs for undergraduate courses restricts the freedom of Departments to reform their graduate programs. As I noted above, the average length of time required to gain the doctorate, in many disciplines, is directly related to the amount of paid work students undertake outside their curriculum. The money available to graduate students from federal and private sources in the

form of fellowships without work obligations is increasing. Many universities are now able to provide full stipends to all or a major portion of their graduate students for the bulk of their time in graduate study. But such funds make it more difficult to staff undergraduate courses with TAs (and to some extent, to fill the need for research assistants as well). Moreover, to the extent that such fellowships do flow into a department, and to the more able students, the average quality of TAs must fall. This is also true of money for research assistantships, which are also competitive for better students with TAships, and which are often more attractive in offering a closer relationship to a faculty member and in providing the basis for a thesis or dissertation.

The necessity of providing TAs also weakens control over the numbers of graduate students. A persuasive argument can be made that many graduate departments should admit fewer graduate students than they do, restrict entry to students who show distinct promise of being able to attain the Ph.D., and then give them the personal attention and financial support that is now diffused among a large number of relatively weak students, most of whom drop out before gaining the doctorate. The argument should be debated on its merits; my point here is that it is difficult to see how a department could introduce such a reform, coupled with a more generous supply of graduate fellowships, and still recruit the "required" number of TAs.

Thus, I suggest, the present burden of staffing our undergraduate

courses with TAs (a) inhibits the search for "free" financial support for graduate students; (b) extends the length of time students take to earn the degree; and (c) reduces the freedom to review and reform the character of graduate programs. Over time, moreover, the competition of other sources of support must lead to a progressive lowering in the quality of students who can be found for the TAships. If true, these constitute a heavy price to pay for the TA system, quite apart from its effects on the undergraduates, on the TAs, and on the relations of graduate students to faculty that I spoke of earlier.

It is easier to condemn the TA system than it is to suggest ways of organizing undergraduate instruction in the big state universities without it. But if we are searching for ways to improve the quality of teaching in the social sciences, then in the state universities we could not do better than to begin with the TA system. We are so delighted to get someone to talk to students in introductory courses we scarcely inquire what they say to them. Yet my own belief is that while a routine, textbook-bound introductory course may not be greatly harmed by the TA-section system (if indeed it can be harmed by anything), it is quite another question to create a more ambitious introduction to the social sciences which depends on TAs for the major part of the direct interaction with the students. This is of course closely linked to the question of resources, as I have suggested; but I think it would be a pity if we design ingenious new courses, focused on stimulating problems and reading lists, and then ignore (as we largely do now) what goes on in the section meetings.

One response to all this will surely be the rhetorical question: "This all may be so, but how else are the big state universities to teach very large numbers of undergraduates, support the bulk of their graduate students over part of their graduate training, and keep faculty teaching loads low enough to recruit and retain research-minded men?" My chief objection to the TA system is that it prevents us from asking those questions seriously rather than rhetorically. I do not have confident answers to those questions, though I believe that a genuine improvement of undergraduate education at large state universities will require that we find some answers to them.

3. The Faculty

It is risky to generalize about the faculty members of large state universities, if only because there are so many of them, doing so many different kinds of educational jobs. But if we restrict our views to the staffs of the social science departments, one generalization can safely be made: by and large, these are men who by self-selection and university policy are primarily oriented toward research and graduate training, rather than to undergraduate teaching. The difficult and often unrewarding conditions of undergraduate teaching at the big state universities are no secret. Men who are deeply interested in undergraduate education are simply not likely to want to go to a big state university; or if there, they are likely to leave as soon as possible. In the favorable job market that has prevailed over the past decade, social scientists by and large are able to find jobs in the kinds of institutions they prefer.

In the leading state universities, retention of faculty, and even more recruitment, is primarily on the basis of scholarly achievement or promise. It is a commonplace (and often a reproach as well) that the rewards in a large university are weighted heavily toward publication and the reputation that publication earns. This reward structure is hard to modify; it has behind it the powerful interest of both the institution and the departments, the reputations of both of which, in a rough way and over time, are products of the aggregate scholarly and scientific reputations of their faculty. (And behind this lies the fact that rewards in scholarly and scientific disciplines are given to those who contribute to knowledge, and who make their contributions known through publication.)

Even where the institution expresses an interest in rewarding teaching ability, it has difficulty in knowing and assessing teacher talents, difficulties magnified by the size, heterogeneity and rapid turnover of the student body, and the consequent absence of an undergraduate community in which enduring relationships and a dense network of communications among teachers and students can generate consistent and reliable assessments of teachers as teachers. Men at leading state universities are typically ambitious for academic reputation and advancement. This results in a continual climate of assessment, but also in a strong sentiment that assessments be "fair," based on universalistic criteria, and accurate. The evidence bearing on a man's teaching effectiveness in these universities is usually neither adequate nor convincing to

the men (administrators or colleagues) who make the assessments. And typically, reports of teaching effectiveness are given little weight in retention or promotion decisions.

The difficulties are illustrated by one large state university which some years ago initiated a largely symbolic prize for excellence in teaching to be awarded annually to three or four young faculty members below tenure rank. After a few years the prize-awarding committees realized they were giving awards to the skill and persuasiveness of supporting letters, rather than to teaching skills. Moreover, the nominations and awards typically went to men who had created some new course or curriculum, or devised some new way of linking labs and demonstrations to lectures.* These are no doubt worthy activities, but they were rewarded not only because they were worthy but also because they produced written evidence -- course outlines, syllabi, and so forth. Skill and devotion in reading papers and talking to students produces no such evidence; popularity among students (who are unqualified to judge mastery of a subject) earns less admiration from colleagues than suspicion of demagogy and showmanship.

But all this is less important than the critics of "publish or perish" believe. These critics, who range from John Gardner to the New Left, imply that the pressures of the institution for publication force faculty members to write when they would rather teach -- that these

* Thus, awards were being made not for "excellent teaching," but for persuasive accounts of educational innovations, which are quite a different thing.

pressures are largely external to the university teacher, who is thereby diverted from his real interest in the undergraduate. My own impression is that university teachers make more severe demands on themselves for research than their institutions do, and that their primary interest in research and their graduate students is their central motivation in academic life.** The big university does not whip or seduce an unwilling body of teachers into research and publication; it recruits research-minded men, and then rewards them for doing what it brought them to do, certainly reinforcing their research inclinations in the process.

It is also sometimes charged that university teachers are indifferent to undergraduates, and take little interest in their undergraduate

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** For the majority it is certainly not teaching! When a sample of Berkeley faculty was asked recently "What proportion of the faculty members here would you say are strongly interested in the academic problems of students?" only a third answered "almost all" or "over half," as compared with 85-90% giving those responses among the faculty at three selective liberal arts colleges. The faculty's judgments of their colleagues is closely reflected in their students' judgments of them: when asked the slightly different question "What proportion of the faculty members here would you way are really interested in students and their problems?" about a third of a recent graduating class at Berkeley answered "almost all" or "over half," as compared with between 50-60% giving those responses at 7 other public and private colleges (not universities). The Berkeley faculty does not think much of itself as a teaching faculty either: only 38% thought that "more than half" of their colleagues could qualify as "superior teachers," as compared with between two-thirds and 90% of the faculty members at three selective liberal arts colleges who think of a majority of their colleagues as superior teachers. On the other hand, two-thirds of the Berkeley sample had published five or more scholarly or scientific papers, as compared with only a third at the most distinguished liberal arts colleges.

courses. Speaking of teachers in social science departments in large universities, I think it a fairer generalization that by and large they have a genuine though limited interest in undergraduate teaching. Among the multiple demands on their time from their own research, their graduate students and courses, departmental and university administration, public service and consulting to governmental and scientific agencies, undergraduates typically do not get first priority; neither are they at the bottom of the list. But the search for devotion to teaching as a sign of grace, to which we are led by the more evangelical critics of the large university, distracts us from asking how the university teacher discharges his responsibility to his undergraduates. Not surprisingly, it is usually in ways that are congruent with his temperament, interests, and other work, all of which have him typically developing and expounding new ideas, and criticizing the contributions of others. I believe that social science teachers in large universities typically take great pains with the preparation of their lectures in undergraduate courses. They work hard at finding ways of communicating the perspectives of social science to naive students; they choose their illustrations with care; they continually rework their notes to introduce new findings and approaches; they are especially good at presenting social science as a process of discovery, emphasizing the provisional and tentative quality of all knowledge, of every formulation. Perhaps they rarely ask their students to reflect on the moral implications of what they study, perhaps not much more often do they raise questions about the

meaning of these findings for the students' own lives. But they do ask very often: how do we know this? what is the evidence for that? and, closely related, how did someone come to find this out? These are, not surprisingly, the questions they are constantly asking of their own work and that of others.

All this leaves something wanting for the contribution of social science to liberal education. At its worst it encourages passivity or a prematurely and narrowly professional attitude toward the social sciences. But the critics also overlook its strengths: the breadth of substantive knowledge presented, the theoretical and methodological sophistication of the teachers, their steady search for meaning in a welter of detail, and the morality implicit in the canons of evidence and the disciplined pursuit of truth. Efforts to reform undergraduate teaching in the social sciences in the public universities might better root themselves in the strengths of the university teachers, rather than be predicated on qualities reformers might wish they had.

Part of the motive for teaching, and many of its rewards, lie in the quality and character of one's students, and in the value that teachers place on those qualities. Social science teachers of an evangelical bent at new experimental colleges look for signs of "enthusiasm" (in the religious sense) among their students; they talk of "turning students on" and find rewards in the immediate response of students who move from apathy and cynicism to a passionate involvement with and moral indignation toward social injustice.

Teachers tend to value in their students qualities they themselves possess. It is relevant, then, in considering the rewards of undergraduate teaching in state universities to observe that the teachers and the students at those institutions are on average less alike in the qualities that university faculty members value than are students and teachers in most other kinds of colleges and universities. Apart from the minority of deeply dedicated teachers, university faculty ordinarily give serious attention to their students when their students are able, studious, intellectually motivated or lively; or when their students, by virtue of their social origins or the status of the university itself, are likely to be the future leaders of the society. The first of these motives operates at the highly selective liberal arts colleges, universities and technical institutes; and in the graduate departments of state universities. The second was the motive at the Ivy League colleges before World War II (when they were not highly selective academically). Both motives operate now at Harvard, for example, though there is a steady shift in importance from the second to the first motive. But neither of these conditions are really met at the undergraduate level of big state universities. Of course in their enormous student bodies they include both gifted students and future leaders, but the numbers of both categories are <u>relatively</u> small and diluted by the large numbers of quite "ordinary" youngsters who are going to achieve neither wealth, nor power, nor intellectual distinction. Whether or not it should, I am afraid this fact does affect the amount

of himself the ordinary state university faculty member puts into his teaching of undergraduate students. (But this is not inconsistent with his putting a good deal of himself into his undergraduate courses.)

4. State University Undergraduates

Little of the discussion of undergraduate teaching I have seen has taken note of the fact that some undergraduates are dull, many ill-educated and barely literate, others profoundly uninterested in their education apart from the cash value of the diploma, still others downright hostile to learning which cannot justify itself by narrow conceptions of short-run practicality. All of these attitudes and qualities of mind are relatively rare in the selective liberal arts colleges and private universities, which recruit not only the most able, but, by and large, the most sophisticated youngsters of college age. But the teacher in the big state university sees these qualities and attitudes in abundance. Any social science curriculum designed for that kind of institution must take into account two facts about the intellectual and cultural resources of state university students: first, that on average, they are academically less able, less highly motivated, and in possession of less of the common coin of intellectual discourse, than are students on average in the selective private colleges and universities. Second, and equally important, the big state universities also recruit a very heterogeneous student population, which includes substantial numbers of highly able, motivated and culturally sophisticated students as well as large numbers less well equipped for

higher education.

For example, Berkeley has 27,500 students, of whom about 17,000 are undergraduates. We currently admit over 5000 Freshmen every year. The Berkeley student body is not only very large; it is also very heterogeneous. The great variety of students is visible immediately to a casual observer; young boys and girls just out of high school, many still living with their parents, mingle on the campus with men and women in their late twenties and early thirties, well along in their graduate careers, enough of them with school age children of their own to overcrowd nearby elementary school systems. The differences are not only of age and maturity, but of basic attitudes and life styles: we have in the same classrooms well-to-do young sorority and fraternity members, sober commuters attending the equivalent of the local city college with eyes firmly fixed on a degree and a job, political activists with a summer or two in Mississippi behind them, bohemians and explorers in search of an identity, young scientists and scholars deep in research and study.

Differences in breadth of knowledge and sophistication are equally striking: at a world-renowned center of study and research on politics and government, a quarter of the entering Freshman class recently could not name the Secretary of State; half had never read a book of poetry for pleasure.* Variations among the students in academic potential are

* By contrast, well over 90% of the entering Freshmen entering three selective liberal arts colleges knew the name of the Secretary of State; three quarters had read a book of poetry for pleasure. Only 1 in 10 of the students entering the state university reported owning more than 75

even more drastic. If we look at the Scholastic Aptitude Test Verbal Profile as a crude measure of readiness for college work, and compare the entering classes of 1960 at Berkeley with those at Harvard, Stanford, Cal Tech and M.I.T., major private universities with whom we compete for faculty, graduate students and research grants, the contrast in the quality of their entering classes is startling. At the four private universities, between 70 and 90 per cent of their entering Freshmen had SAT Verbal scores of over 600. At Berkeley the comparable figure was 30%. At the other end of the scale, none of the private universities reported more than two per cent of their entering students with Verbal scores of under 500; Berkeley admitted nearly a third of its Freshmen with scores of 500 or below -- this despite the fact that Berkeley is one of the more selective of state universities, admitting students who have been in the top twelve or thirteen per cent of their high school graduating classes. But these distributions, interesting as they are, conceal the fact that Berkeley's very large entering classes ensure that we have as many highly able students as these other selective private universities. In 1960 Berkeley admitted "only" 4200 Freshmen, as compared with the more than 5000 today. Yet even then we admitted 420 students with SAT Verbal scores of over 650, and almost a thousand with SAT scores of over 600, more at that level than entered M.I.T. and Amherst combined. On the other hand, in that same year we admitted over

*(cont. from previous page)

books; at the three selective liberal arts colleges between a fifth and a third of the students owned that many. Half of the Freshmen at the university owned fewer than 15 books, as compared with 20-30% at the three colleges.

500 students with SAT(V) scores of under 450, and over a thousand with scores of under 500, three times as many with scores that low as entered Kutztown State College in Pennsylvania.* In other words, on this or other measures of academic ability, we have in the same institution and within the same classrooms and lecture halls, groups that match the entering classes of some of our most distinguished colleges and universities side by side with replicas of the entering classes of far more modest institutions.

I do not want to lay too great a stress on SAT scores. We have good comparative figures on them, and they give us a sense of one kind of variation, and a not unimportant one, in the student body at Cal. But the equally wide variations in student attitudes, orientations, motivations, cultural styles are perhaps more important for the character of the institution, and for the problems it faces. For example, I have referred elsewhere to a crude typology of student subcultures, to which I have given the names "collegiate," "vocational," "academic," and "non-conformist." Students having these different orientations to their education differ in other important respects as well -- in their life experience before entering college, in what they hope to do and be after leaving, and in their current relation to the university in all its aspects. In the selective liberal arts colleges and leading private universities, the enormous growth in demand for college places since

* See Appendix 1.

World War II and the increased selectivity this has allowed has led to a decline in the old collegiate culture of college fun and games, and a decline also in a narrow vocationalism. We find in those institutions a predominance of able, academically oriented students, the great majority of whom are going on to graduate and professional school, with a leavening of intellectually-oriented "non-conformists." But at Berkeley, as at other big state universities, but by contrast with the selective colleges and universities, students with collegiate and narrowly vocational orientations are in the great majority. Their attitudes and values permeate the world of the undergraduate, and are a major force which the undergraduate teacher in those universities either fights or ignores (more commonly the latter). The big state universities do not differ in this respect from the four year state colleges, or indeed, from most other colleges and universities in this country, apart from the most selective "elite" private institutions. But they do differ from other less selective institutions in two respects: first, in also including large numbers of students who in ability, motivation and sophistication resemble the students in the best liberal arts colleges, and second, in the range of competitive interests and activities of the faculty. State universities are not academic communities; they are collections of communities and aggregates of students. At least some of our difficulties, not least in our efforts to teach undergraduate social science, have arisen out of our indifference to the nature of the complex societies that these comprise.

The existing curriculum, and especially at the introductory level, at most state universities takes very little note of this diversity within their student bodies. If we are concerned to improve the quality and relevance of undergraduate social science teaching at these institutions, we might start by learning more about the diverse intellectual resources of our students, and then try to design differentiated programs and courses of instruction with these differences in mind. Some university departments already offer different introductory courses for prospective majors, and for all others. My own belief is that a professed inclination to major in a subject is one of the least useful bases for distinguishing among students, quite apart from its tendency to encourage (or indeed, require) a premature decision, one which might better be postponed by most students till the end of the second or beginning of the third year. And there are the honors courses, typically offered only to majors late along in their undergraduate careers. These do select, more or less, for academic performance and apparent motivation, but do not meet the problem of the introductory course, nor of the place of the social sciences in liberal education -- and those are the big problems. But surely we ought to be able to design courses for students who indicate a willingness to work beyond the requirements of the ordinary introductory course. Perhaps we can even attempt the more difficult task of designing a distinctive "introductory" course for students who are already at home in the social sciences when they enter college -- who have read history, anthropology, archeology

with a personal interest and curiosity before arriving in college. And that might be a quite different course from one designed for those whose whole conception of social science has been gained from high school texts in American history and civics, and to whom the modes of thought of university social scientists are utterly unfamiliar and bewildering.

Differentiation among social science courses currently takes place in a variety of informal ways. Different subjects, through their reputations and images, recruit students of very different abilities and motivations. Within subjects there is the subterranean lore about "mickey mouse" courses that take little time or effort. A sociology department can attempt to reshape its clientele by introducing a difficult statistics requirement, in part to screen out girls with mild interests in social welfare. But generally, big university social science departments deal with diversity among their students by grading them rather than by teaching them differently.

The difficulties that attend explicit recognition of diversity among students are very great, and perhaps insoluble. Quite apart from the problems of selection and differentiation (on what bases and through what instruments?), there are the problems attendant on concentrating the least sophisticated (or motivated or able) in one class. Who is to teach them? How is that task to be kept from appearing (and being) a specially onorous burden, or the mark of second class citizenship in the academic community? And what of the effects on the less able (or

motivated or sophisticated) of draining off the more able (motivated, sophisticated) -- a problem we are more familiar with in the guise of de facto school segregation? It may be that these problems presented by the enormous student heterogeneity in big universities are too great to deal with except as we do now. But if so, then this too is something that reformers should know, since this diversity will pose problems if we continue to bring it within a single classroom as well as if it becomes the stimulus for a curriculum that attempts to reflect the diversity of student resources and interests.

5. The Organizational Patterns of Large State Universities

This imposing subhead points to a subject about which I think little is known, especially as it bears on the possibilities and processes of educational innovation. My impression is that departments have considerable discretion in determining the content and character of their course offerings, and in the allocation of their resources among their own offerings. There is considerably greater difficulty about developing courses across disciplinary lines; these typically need the support, or at least the approval, of a Dean of the local College of Letters and Sciences (or its equivalent) as well as of a Course Committee, typically drawn from the College as a whole. Again, my impression is that Deans are usually more hospitable to experiments and innovations than are faculty committees; professors of chemistry and French often stubbornly demand that a new course in the social sciences be justified as equally "tough," demanding and professionally respectable as the course

it is intended to replace. (An experimental interdisciplinary course recently introduced at one large state university covering the first two years and affecting ~~or~~ 125 students out of 5000, would have been killed by the local Committee on Courses if it had not been appealed to the whole body of faculty of the College.) The receptivity to new interdisciplinary courses will certainly vary as between institutions and departments; in many cases, a determined effort by a group of deeply committed faculty members may win them permission to go ahead. More university teachers will support such efforts, and even take part in them, than will make the investment of time and energy needed to fight them through the machinery of the institution. A good deal of the fresh thinking about introductory courses in social science has centered on the value of interdisciplinary courses. My own inclination would be to see whether fresh approaches to undergraduate teaching could not be developed by members of a single department, many of which include within their own membership a quite wide range of interests and orientations. (My impression is that as some social science departments become more narrowly "professional" and specialized, others, equally large and sprawling, make a virtue of their size by becoming more catholic and flexible in their conceptions of their boundaries, and are genuinely "interdisciplinary" within themselves.) Or two departments might find ways of offering joint introductory courses within the nominal framework of the existing course structure, pushing to the limits the considerable discretion they have of making internal innovations and

evading where possible large pronouncements to the world of their novel and experimental intentions. It may be that innovations could thus be made more frequent and casual and informal, as well as easier to accomplish. It is sure that if every innovation is a major "project" requiring sustained exhortation, justification, and vote-getting, there will not be many of them in the big universities.

Our big universities seem to show an odd combination of cumbersome rigidity at the college and university level along with considerable freedom and flexibility within the department. The autonomy of the department (as the administrative form of the scholarly discipline), coupled with the fact that most faculty members have their attentions fixed elsewhere, affords the individual faculty member a freedom that arises out of other people's ignorance and indifference to what he is doing. But this freedom is dispelled if a faculty member demands that the institution give approval and support for his innovations, as he must do if he is asking additional resources from the university, or for changes in formal requirements or course titles or something similar.* There is a strain in large universities, as in other large organizations, toward the standardization of rules and procedures, and toward their extension to all to whom they might legitimately be applied. Thus it is difficult to introduce non-graded courses, for example, without the

* External grants for the support of educational innovations should certainly increase our freedom to experiment with the curriculum. But this will raise the question of the survival of "successful" experiments if and when external support ends; or whether indeed we ought not welcome the necessity to terminate our "experiments" before they become firmly institutionalized.

acceptance of general university rules governing their use. In part this arises out of the pressures for administrative convenience and consistency. In addition, there is the sense that all students should be treated similarly, and subjected to the same standards and general procedures.

Yet there are, in every big university, very great differences in procedures from department to department and from course to course. The elaborate bureaucratic rules governing registration, grading, credit requirements and the like exist side by side with the variety of practice arising out of the autonomy of the teacher and the department, who appeal on one hand to the technical requirements of their own subject matter,* and on the other to the vague but extensive rights and powers implicit in the notion of academic freedom. It is not always clear, therefore, where discretion lies in the decisions that affect the encounter of student and teacher, nor what the limits are on the exercise of that discretion. For example, departments vary greatly (but within limits) both in their "normal" teaching loads, and in the proportion of their resulting teaching resources they assign to undergraduate courses; the frequency of class meetings is nominally set forth in the catalogue, and is tied to the credit value of a given course, but actually, within

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* On this they are final arbiters: the discipline is what they say it is. There is no higher authority. That is a basic source of the autonomy of big university departments.

Nevertheless, not all university departments enjoy the same measure of autonomy in all areas of decision. The fact of that variation has a bearing on the introduction of academic innovations; the sources of the variation are worth exploring further elsewhere.

broad limits, lies in the discretion of the individual instructor; while grading procedures appear to be firmly fixed and enforced throughout the university, with some very clearly defined exceptions.

In part, the location of the decision on these matters is a function of their visibility (the more visible, the less diversity permitted). In part, the question of administrative convenience is involved: the Registrar must have grades. In part, the effect of variations in practice on relations with other institutions is involved: students who transfer or apply to graduate or professional school must have records filled with standard notations regarding grades and credits that presumably have a common meaning. But this is by no means the whole story, and merely points to broad questions about the location of and constraints on academic power, and about the tension between the forces making for diversity and standardization of pedagogic rules and practices in large public universities.

But all this, which might be called "the tactics of innovation," deserves more thought and discussion and perhaps even study, along with the institutional structures and patterns it is directed at changing or evading. We are dealing with much more elaborate, and usually more cumbersome, administrative arrangements than are common in the private colleges and universities. We may want to reflect on whether our enterprise calls for a direct assault on those arrangements, or whether more often the freedom we need for experiment may not flourish in the cracks between the flagstones.

Some implications for the teaching of social sciences in the large state universities.

Innovations in the undergraduate social sciences in large public universities ought to take into account the special characteristics of those institutions, their students and faculty members. It is not hard to imagine innovations that would have a marginal impact on such institutions: they have a minority of faculty (though a somewhat larger minority in the humanities than in the social sciences) who are primarily interested in teaching undergraduates, and give them first claim on their time and energies. Such people can design courses involving high levels of faculty involvement and student-teacher interaction which take as their models the best practice in small elite liberal arts colleges. Universities, at a time of ferment and discontent regarding undergraduate teaching, can even be persuaded to allocate special resources of faculty to such "experimental" programs, as evidence of their serious interest in undergraduate teaching. (This also serves, as David Riesman would say, to "contain by partial incorporation.") The approximation to the liberal arts college model can be even closer if these "experimental" courses recruit or admit students of specially high motivation or aptitude. In effect, a tiny liberal arts college program can be created and (perhaps temporarily) sustained within a university department or undergraduate college.

Such marginal programs are not without value. Assuming they are imaginative and well-designed in themselves, they provide a valuable

experience for the faculty and students directly involved, and perhaps more important, a source of ideas for others throughout the system. A central problem for large institutions is routinization and standardization of modes of instruction. Anything which promotes diversity and frees creative energy must be welcomed.

Nevertheless, innovations must remain marginal so long as they do not come to terms with the dominant, the typical characteristics of the large public university, its students and teachers. In my view, the most important of these are:

a. a relatively poor staff-student ratio.

b. a research-oriented faculty with a genuine but limited interest in undergraduate teaching

c. a student body which is on average relatively weaker but also far more heterogeneous in academic ability and motivation than its counterparts at selective private colleges and universities.

d. structures which make curriculum revision and innovation relatively easy within departments and relatively difficult across departments.

What are some of the implications of these characteristics for innovation and improvements in social science teaching in big state universities?

1. First, an improvement in faculty resources allocated to undergraduate teaching. Whether one thinks of more contact with students, or seminars, or field work, or guided study, or more time for course planning and design, more faculty time is needed than is customarily provided for the introductory social science courses. I doubt if this

is to be gained by rearranging teaching responsibilities or by increasing teaching loads, or by exhorting university teachers to spend less time on research and more on teaching. Orlans and others who speak of a "flight from the classroom" lead one to believe that if that flight could be halted or reversed, undergraduates would get the teaching they need. I believe, however, that the supposed "flight from the classroom" is a much smaller factor than are the relatively small resources budgeted for undergraduates in the big state universities. It is not so much that teachers have withdrawn from undergraduate teaching, as that there weren't enough of them to begin with to do research, teach graduates, and carry the many other functions they now carry, as well as create and sustain an imaginative program of undergraduate teaching. It is also my impression that there was formerly often a kind of division of labor within big social science departments, between a group of men, often "local" in orientation, who did relatively little research and writing but carried a disproportionate load of teaching, and another group, oriented toward the discipline, research and graduate students, who did relatively little undergraduate teaching. My impression is that in many universities the processes of attrition, self-selection and selective retention have reduced the numbers of student-oriented "locals," while creating departments full of research-minded men for whom undergraduate teaching is a job but no calling.

2. While there are many able, motivated students in big state

universities, the size and anonymity of those institutions dilutes them. Thus while they are present in every class, the instructor may not find out who they are till the end of the semester. (If the class is large enough and he has a Reader he never does.) Moreover, it is very rare for a student to see a given faculty member in more than one course: student attrition is high, departments are large, faculty members very often on leave, and a constant stream of short-term visitors carries a significant proportion of the undergraduate teaching "load." Under these conditions not only can the motivated and interested students not make contact with their teachers, but they also have trouble finding one another. In my own view the central problem of undergraduate education in the big universities lies not so much in the curriculum as in the logistics or ecology of intellectual life. It is the problem of bringing lively curious students together, and of then somehow putting them in touch with a teacher. It is the problem not so much of improving "teaching" as of creating the conditions under which teaching and learning can best go forward. There are students (perhaps the most highly sophisticated and motivated of all) who can learn from books and distant lecturers and in isolation. But many need the support, stimulation and correction of other students and teachers. And this they do not get in large anonymous classes from remote lecturers and harassed TAs. They need to communicate with people who share their questions and interests. But their dilution among numbers of students who do not have those interests greatly inhibits that communication,

both among students and between students and teachers. What are needed are devices for concentrating students with common interests and facilitating the connections of those groups with teachers. There are of course some "concentrators" working even on big university campuses -- students with common interests in learning do somehow meet one another -- but they are few and especially feeble for first and second year students. Residence halls are conspicuously poor at this job, since they usually have little distinctive "character," bring people together at random and thus reinforce the interests that comprise the collegiate subculture, the lowest common denominator of college student life. Political clubs and civil rights organizations do serve this function; and one of the latent functions of last year's political ferment at Berkeley was to serve as a "concentrator" of able and motivated students (who comprised a disproportionate number of the activists). The smaller classes for majors in a field serve this function for third and fourth year students; the big introductory courses do not.

We can concentrate students of special ability, motivation or other quality, using such instruments as tests, grades, questionnaires or interviews; or we can permit students to concentrate themselves through voluntary self-selection. Aside from the fact that they do not meet the problem of the first two years, they may also "over-select" out the highly motivated pre-professionals who are set for graduate school, for which the honors courses are a kind of anticipatory socialization. These courses typically miss able and lively students who are

not so clear about themselves or their futures. In Appendix 2 I suggest, with considerable tentativeness, another kind of "honors course," based exclusively on self-selection, and available to students if their first and second years without the necessity of having shown high aptitude or commitment to social science, or indeed of anything except an interest in learning, as expressed through the readiness to take what is advertised as the more demanding of two options. I do not pretent this is an adequate solution of the problem of the introductory course in the big state university; for one thing, it says nothing about what is to be done with or for "the others," the students who out of wariness or indifference or other stronger interests are inclined to "take" some courses in social science without being taken by them. Such students perhaps need evangelists; but evangelists are conspicuously rare in the social science faculties of big state universities. With more resources put into teaching them, many such students can be brought to see the pleasures and intrinsic rewards of learning. At present they are mostly lectured at, fill seats and blue books.

The comprehensive university

We are dealing here with problems of "comprehensive institutions of higher education," problems that resemble those encountered in the far more familiar setting of the American public high school. By "comprehensive" I mean serving a very wide range of interests and abilities within the same institution. In this sense, while American higher education as a system is truly comprehensive (unlike most systems

of higher education abroad), very few of its constituent colleges and universities are, and among these the big state university is the only major category. The selective private institutions are not "comprehensive," nor are most denominational colleges, or lesser regional private colleges, or the minor state and teachers colleges. The students in all these kinds of institutions are far more homogeneous in ability, interests, and educational values and orientations than are the undergraduate student bodies at Berkeley, or Michigan, or Indiana, or Texas.

And the educational problems of comprehensive high schools appear in the big universities as well:* whether to create more homogeneous subgroups (the different "tracks" and "courses" in the high schools); how to allocate teaching and other resources (more to the less able or motivated who "need" them more, or to the able and motivated who want more and more visible profit from them?); what are the effects of segregating by interest or ability, both on the more and on the less able (motivated, sophisticated)? In this area, as perhaps in most areas of public policy, moral dilemmas and questions of fact are intertwined; our views on whether to concentrate students or how to allocate resources among them will surely be influenced by knowledge of the educational

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* Big universities share some of the problems of comprehensive high schools, but have some special to themselves: for example, a faculty which typically is far more homogeneous than their students, and which shares the values and attitudes of only the "academic" subculture among them. (This is a problem also in high schools in big city slum areas.)

effects of those policies.*

But while identifying state universities as "comprehensive institutions" may help identify some of the problems special to them, it does not provide clear directives for solving them. For whether to concentrate able students or to allocate resources differently is always a question of more or less; not "whether," but "how much and in what ways." Moreover, the educational consequences of such decisions are obscure, and affected by a host of special circumstances: campus tradition, quality of leadership, location, size, recent events, the climate of ideas within and outside the institutions, etc. etc. For example, a tradition of scholarship; leaders interested in intellectual as well as administrative and financial problems; nearness to urban centers of culture; ferment associated with student or faculty dissatisfactions; a climate on and off campus favorable to academic innovations -- all these and other factors and conditions properly affect the nature of the innovations one might support. Thus, in my own institution I believe our ablest students need to be identified earlier, brought together more, and taught by the faculty. I also think most of the "favorable" conditions I mention above are true for Berkeley at the moment. Under these conditions (but probably not in their absence) I think we can go further in the direction I have sketched without creating educational slums elsewhere in the institution -- a danger under any circumstances, though a greater danger where these "favorable" conditions do not exist.

*But since knowledge based on evidence about these matters is rarely available, and is difficult and expensive to acquire, and since in any event it will only be one factor among others in choosing among policies,

The problems of comprehensive higher education are endemic to the undergraduate colleges of big state universities. I doubt if they will become more selective; indeed, if the pressure for places from state residents forces them to cut back their admissions of out-of-state students, they may well become effectively less selective, (though this may be balanced if a broad system of Federal scholarships encourages more able youngsters to go to the state university rather than commute to a nearby state or junior college). In any event, the enormous heterogeneity of the students will persist, and be especially marked in the first two years.

The faculty members of the academic departments of state universities have not advertised the comprehensive character of their institutions in part because many of them have tried to pretend that they are teaching in private universities run on public funds. Their salaries, teaching loads, faculty autonomy and self-government, graduate students, research support, leave policies, all support the illusion. The fantasy is really dispelled in daily experience only in relation to the undergraduates, and can be sustained even there if one teaches them infrequently, impersonally, and as if they were all majors and candidates for graduate school. (The illusion is also dispelled periodically by events arising out of the university's relations with its social and political environment; and most brutally at times of crises.) But this illusion, whatever function it serves for the recruitment and retention of the faculty, does not serve the interests

(* cont. from previous page)
it is more common to substitute wisdom (i.e. currently held beliefs and assumptions) which is anyway cheaper and possessed by everyone (even if it is not always the same wisdom).

of the undergraduates, nor of good teaching of undergraduate social science. And it certainly interferes with our seeing the problems of undergraduate teaching in the state university, or of doing much about them.

Nothing I have said in these notes should be taken as critical of efforts to design new and better introductory courses in the social sciences. I agree that the ways in which students are introduced to social science is very often dull and unsatisfactory. But I have been speaking to different questions, namely, to some of the characteristics of big public universities which condition our efforts to reform the way social science is taught (and especially introduced) in them. We may be more successful in those efforts if we know more about the environment and the raw materials of our experiments. I feel more confident about the nature of the problems I have discussed than about their "solutions"; clearer also that the "solutions" will differ in different institutions than about what should be done in any one of them. But we need not wait until we have more knowledge; indeed, one way to learn about the state university as a context for innovation is to try to innovate and see what happens. Let us by all means design new courses and new ways of teaching; but let us also attend to their fate.

Appendix 1

It may be of interest to compare the Scholastic Aptitude Test scores of entering Freshmen at Berkeley with other Freshmen classes in institutions with which we are competitive for faculty. While Scholastic Aptitude Test scores are only moderately good predictors of any individual student's academic success in college, the distribution of those scores are certainly indicative of the academic potential of an entering college class. The SAT verbal profiles for boys from public high schools entering Berkeley, Harvard, Stanford, Cal Tech and MIT in 1960 are shown in Table 1, together with the profiles for the classes entering the University of Michigan and Cornell in 1964.

Table I*

SAT Verbal Profile, per cent

	Males from public schools, 1960*					Enrolled Freshmen, 1964**	
	Berkeley	Harvard	Stanford	Cal Tech	MIT	Michigan	Cornell**
Score Intervals							
750-800	1	32	4	10	8	3	5
700-749	3		15	35	24	3	21
650-699	10 } 30	46 } 78	25 } 71	28 } 89	31 } 84	13 } 38	32 } 81
600-649	16		27	16	21	19	23
550-599	20	19	18	10	12	21	12
500-549	20		9	1	2	19	5
450-499	14		2	1	1	13	1
400-449	9 } 29	2	1	---	1	7 } 22	---
350-399	4	---	---	---	---	2	---
300-349	2	---	---	---	---		---
						N 4206	786

Other selective private liberal arts colleges show distributions similar to Harvard's and Stanford's. For example, at Amherst, 81% of entering Freshmen had SAT Verbal scores of 600 or higher (1960).

When we look at these distributions, we see that Berkeley's (and Michigan's) undergraduates are in a different league as compared with the other private colleges and universities with which we exchange faculty. But the distributions conceal the fact that the very large size of our entering classes means that in absolute numbers we have many more highly able students than any one of these other institutions.

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*From Table * in "Interim Report of the Committee on Limitation of Enrollment," in Notice of Meeting, Berkeley Division, April 14, 1954.

From CEEB, Manual of Freshman Class Profiles, 1965-1967. The figures for Cornell are for Freshmen enrolled in the College of Arts and Sciences; for Michigan, all enrolled Freshmen.

For example:

Table 2*

1960-1961 SAT Verbal Scores	Number of Entering Students in Each Category			
	Berkeley	Amherst	Cal Tech	MIT
700 or higher	112	50	54	181
650 or higher	421	134	131	445
600 or higher	965 (30%)	216	185	700 (90%)

Berkeley with 3551 entering Freshmen in that year had nearly as many entrants scoring over 650 on the SAT Verbal as MIT, and more than MIT and Cal Tech combined with SAT scores of 600 or better. And yet that score represented only 30% of Berkeley's entering class, as compared with between 80 and 90% of the entrants at the other three institutions.

We could tell much the same story if we had comparable measures of academic motivation and seriousness of purpose: relatively small proportions but large numbers at Berkeley, as compared with other leading selective institutions.

Berkeley has a good number of able and motivated students. But as a minority, they cannot set the intellectual climate of the undergraduate colleges, and thus it is hard for the faculty to identify and teach them.

Looked at another way, almost a third of our entering class as recently as 1960 had SAT Verbal scores of below 500. (That compares with 1-2% with scores in this range at Harvard, Stanford, Cal Tech, etc.) While comparable data on Berkeley for more recent years have not been compiled, there is evidence that the distributions of scores have not changed much. That means that we now admit (as we did in 1960) over a thousand Freshmen with SAT Verbal scores of below 500, and over 500 with scores below 450.

Kutztown State College, Kutztown, Pennsylvania, admitted 534 Freshmen in 1961. Their student body is not academically distinguished: Only 6% had SAT Verbal scores of 600 or higher while 63% had scores under 500--that is, 312 students. Berkeley admits three Kutztown Freshmen classes (at least on this measure of academic potential) along with its MIT class and a good many others besides.

* Absolute numbers for Stanford and Harvard are not available. Other figures from Manual of Freshmen Class Profiles, College Entrance Examination Board (1961 edition). The Berkeley figures supplied by the University Office of Educational Relations.

Appendix 2

A Proposal for an Honors College at Berkeley

It is by now almost a platitude that a central difficulty at Berkeley arises from the fact that our faculty centers most of its energies and attentions on graduate instruction and research, while tending to slight undergraduate instruction. This is not to say that many of our staff are not devoted and conscientious teachers who prepare their lectures with care and try to find time for undergraduates. But, by and large, I think it is fair to say that undergraduates at Berkeley get less personal attention from the faculty than they get elsewhere or than they need. This certainly is supported by data from a current study of Berkeley and seven other institutions.

The common response to this is to say that "something must be done," and to call in vague ways for more attention to undergraduate teaching. But I think this overlooks some hard facts about our undergraduates. It is true that faculty time and attention here is drawn off by research and graduate students, and that the reward system encourages propensities already strong in the kinds of men who are recruited to Berkeley. But there is another reason why teaching doesn't get its proper attention from our staff: it is a great part of the time simply not sufficiently rewarding for the teacher. And this is because our undergraduate body is a very heterogeneous group of students, many of them of only modest talent, many more of them not deeply interested in advancing their own education.

I do not think that in the foreseeable future we can do anything to change the character of the whole undergraduate student body (as, for example, Stanford has over the past decade). But I think we must find some way of identifying within our present student body the able and motivated students early, of bringing them together, and providing them, at least, with the personal contact with faculty, in small classes, seminars and even group tutorials, that is necessary for a genuine liberal education. As a means to that end I would like to suggest the creation of an Honors College, with these characteristics:

1. First, it would exist as a distinct and somewhat autonomous college within or parallel to the College of Letters and Science. It would accept students at entrance, or any time thereafter, and would permit them to stay within it, on condition of acceptable performance, throughout their four years.

2. Second, it should <u>not</u> be highly selective on previous academic performance. Rather, it should have quite liberal standards of entry, excluding only those students with marginal records. It should, however, be known as a college with a more demanding curriculum than the standard curriculum. It would make clear that while its students will get more intensive instruction, it will demand a larger commitment from its students to their own self-education. The rewards of teaching are a function less of the innate ability of students (above a reasonable minimum, which most of our students meet) than of their seriousness of purpose.

Applicants to the Honors College will be asserting their seriousness of purpose. A short interview with a faculty member prior to entry should be able to underline the nature of their commitment.

3. Students should be permitted to withdraw from the Honors College and return to the ordinary curriculum at the end of any semester without prejudice or negative mark on their records. Similarly, since the penalty for dismissal is light--i.e., return to the ordinary curriculum rather than dismissal from the university--a student should be able to be dismissed from the College fairly easily on evidence that he is not prepared to do the kind of quality of work it asks of him.

Degrees earned in the Honors College should be the same degrees earned through the regular curriculum, without any special notation such as "graduation with Honors." The rewards of work in the Honors College should be intrinsic, so far as possible. Moreover, not making this distinction in degrees should remove the administrative difficulty regarding easy transfer between the ordinary curriculum and the Honors College.

4. The Honors College should be taught primarily, if not exclusively, by members of the faculty, although good use can be made of graduate students as teaching aides of various kinds. I do not want to suggest hard rules on this, since the economics of the situation, and the circumstances of different departments, need to be taken into account. But the principle that the main burden of teaching remain with the faculty is central to the whole idea.

5. The question of how the teaching staff for the Honors College should be selected and organized is a knotty one. One solution would be to assume that faculty members will teach partly in the regular curriculum, partly in the Honors College, depending on their interests and the necessity of providing instruction to all undergraduates. Preferable, to my mind, is for the Honors College to have its own attached body of faculty, made up of members of the faculty who are most deeply interested in undergraduate education, and who volunteer for the College. I am quite sure there will be a fair proportion of our faculty which will not want to give the time and energy that such an appointment would entail; I am equally sure there will be many who will. The advantage for the student is the obvious one of continuity and the opportunity to work with a man for more than one semester or quarter. Moreover, such a body of faculty may be able to develop new programs of instruction in a way that would not be possible if the Honors College had the partial attention of the whole body of the faculty. The obvious shortcoming of such an arrangement--the creation of a "class" system among the faculty--is, I think, not so serious, since the prestige of undergraduate instruction, even in an Honors College, is simply not so great at Berkeley, as over against other sources of prestige arising from research and graduate instruction.

However, a faculty member's appointment to the Honors College should be for a definite period--say, three or five years--with the understanding that a fair proportion of the faculty may wish to withdraw from the program for periods devoted more intensively to research and graduate instruction. In fact, one might argue for a policy of not permitting more than two consecutive terms in the Honors College, as a way of preventing the emergence of two distinct groups--a teaching staff and a research staff--within the faculty.

6. A body of able and motivated students in contact with faculty who have volunteered for a period of more intensive teaching are the necessary conditions for the development of effective and genuinely integrated programs of undergraduate instruction. I do not wish here to make any suggestions along those lines, since such a program can only arise out of the thinking of people from many different departments. But such a College could certainly experiment with various arrangements--interdisciplinary courses, the partial abolition of grading (as has recently been done at Cal Tech and elsewhere), and so forth--that are less easy to introduce in Letters and Science as a whole. The existence of such a College, and of a body of men more or less continuously concerned with improving the quality and effectiveness of the undergraduate program, would I believe fill a very serious lack at Berkeley.

One objection to an Honors College is that it would separate the students into a more and a less privileged group, certainly with respect to the attention given to them by the faculty. But such a distinction would be rooted in the only grounds which can be defended as legitimate--that is, in the expressed interests and demonstrated abilities of the students themselves. And if the chief criterion of entry were not academic performance but seriousness of purpose and interest in one's own education, I do not think those outside the College could have any legitimate basis for complaint. Moreover, many other colleges, both public and private, have some kind of honors program or experimental college, without apparent difficulty. (Michigan is one of them.) And we might certainly want to learn from them.

There has been a good deal of loose thought and conjecture, especially in connection with the recent disturbances, about the alienation of our students, and their discontent with the factory-like atmosphere of Berkeley. There is, I think, a good deal of truth in these observations, but I believe it applies not to our whole undergraduate body, but to a significant fraction of it. A very large part of our undergraduates are getting the kind of education they want and expect. They are here more or less because it is expected of them; they have certain notions of what they have to learn to be a college graduate, and by and large our courses meet their expectations. I am not saying that some of those students could not be induced to raise their intellectual horizons by closer and more serious attention from their teachers. The Honors College, as I have suggested it, would ask of them for admission only an expression of interest on their part in their own education; without that, nothing very important is likely to happen to them while they are here, regardless of what

we do. I do not mean to sound cynical, but I think we must recognize what we cannot do in order to be able to do more than we are now doing for students who can profit from closer attention. It is the serious students, those with high demands and expectations of us, who are discouraged and alienated by mass processing and mass education at Berkeley.

Our inattention to undergraduate instruction is not only dangerous, it is wrong. I do not propose a dimunution in resources devoted to research and graduate instruction; I believe that any attack on research in the name of teaching would be disastrous for a university that is not a liberal arts college, but rather an international center of learning. But I think that our efforts in undergraduate education must be more focused and differentiated, and must reflect the enormous differences within the student body, in their intellectual orientations and aspirations as well as in their academic abilities, differences which we see in our classrooms as well as in the data of research studies. We cannot mount an undergraduate program of very high quality for the whole body of our undergraduates, both because we don't have the resources for it, and also because many of our students would resist it. But we can at least teach our most serious and dedicated students more effectively than we do. An Honors College might be one way to help us begin to do that.